ORDER FOR SUPPLIES OR SERVICES

PAGE 1 OF PAGES 18

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

1. DATE OF ORDER: 09/22/2020	2. CONTRACT NO. (If any): EP-C-16-006
3. ORDER NO.: 68HERC20F0425	4. REQUISITION/REFERENCE NO.: PR-OW-20-00489

5. ISSUING OFFICE (Address correspondence to):
CAD
US Environmental Protection Agency
26 West Martin Luther King Drive
Mail Code: W136
Cincinnati OH 45268-0001

6. SHIP TO:
a. NAME OF CONSIGNEE: AWPB-MB
b. STREET ADDRESS: US EPA-OW-OWOW-AWPD-MB
1200 PENNSYLVANIA AVE., NW
MC-4503-T
c. CITY: WASHINGTON
d. STATE: DC
e. ZIP CODE: 20460

7. TO: ROBERT ERICKSON
a. NAME OF CONTRACTOR: ESS GROUP, INC.
b. COMPANY NAME:
c. STREET ADDRESS: 10 HEMINGWAY DR # 2
d. CITY: RIVERSIDE
e. STATE: RI
f. ZIP CODE: 02915

f. SHIP VIA:

8. TYPE OF ORDER
☐ a. PURCHASE
REFERENCE YOUR:
Please furnish the following on the terms and conditions specified on both sides of this order and on the attached sheet, if any, including delivery as indicated.
☒ b. DELIVERY
Except for billing instructions on the reverse, this delivery order is subject to instructions contained on this side only of this form and is issued subject to the terms and conditions of the above-numbered contract.

9. ACCOUNTING AND APPROPRIATION DATA: See Schedule

10. REQUISITIONING OFFICE: AWPD-MB

11. BUSINESS CLASSIFICATION (Check appropriate box(es))
☐ a. SMALL ☐ b. OTHER THAN SMALL ☐ c. DISADVANTAGED ☐ d. WOMEN-OWNED ☐ e. HUBZone
☐ f. SERVICE-DISABLED VETERAN-OWNED ☐ g. WOMEN-OWNED SMALL BUSINESS (WOSB) ELIGIBLE UNDER THE WOSB PROGRAM ☐ h. EDWOSB

12. F.O.B. POINT:

13. PLACE OF		14. GOVERNMENT B/L NO.	15. DELIVER TO F.O.B. POINT ON OR BEFORE (Date)	16. DISCOUNT TERMS
a. INSPECTION	b. ACCEPTANCE			
Destination	Destination			

17. SCHEDULE (See reverse for Rejections)

ITEM NO. (a)	SUPPLIES OR SERVICES (b)	QUANTITY ORDERED (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)	QUANTITY ACCEPTED (g)
	DUNS Number: 019131986 TOCOR: Brian Topping Max Expire Date: 01/22/2022 InvoiceApprover: Brian Topping Alt Invoice App: Damaris Christensen Continued ...					

18. SHIPPING POINT:
19. GROSS SHIPPING WEIGHT:
20. INVOICE NO.:
17(h) TOTAL (Cont. pages): $999,385.00

21. MAIL INVOICE TO:
a. NAME: RTP Finance Center
SEE BILLING INSTRUCTIONS ON REVERSE
b. STREET ADDRESS (or P.O. Box): US Environmental Protection Agency
RTP-Finance Center (AA216-01)
109 TW Alexander Drive
www2.epa.gov/financial/contracts
c. CITY: Durham
d. STATE: NC
e. ZIP CODE: 27711

17(i) GRAND TOTAL: (b)(4)

22. UNITED STATES OF AMERICA BY (Signature): 09/22/2020 ELECTRONIC SIGNATURE

23. NAME (Typed): Sandra Stargardt-Licis
TITLE: CONTRACTING/ORDERING OFFICER

AUTHORIZED FOR LOCAL REPRODUCTION
PREVIOUS EDITION NOT USABLE

OPTIONAL FORM 347 (Rev. 2/2012)
Prescribed by GSA/FAR 48 CFR 53.213(f)

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

DATE OF ORDER	CONTRACT NO.	ORDER NO.
09/22/2020	EP-C-16-006	68HERC20F0425

ITEM NO. (a)	SUPPLIES/SERVICES (b)	QUANTITY ORDERED (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)	QUANTITY ACCEPTED (g)
	Admin Office: CAD US Environmental Protection Agency 26 West Martin Luther King Drive Mail Code: W136 Cincinnati OH 45268-0001 Period of Performance: 09/22/2020 to 01/21/2022 This Task Order is the result of Request for Task Order Proposal PR-OW-20-00489. ***Option Form 347, Box 11. Business Classification should indicate that ESS Group, Inc. is a "small" business. However, it is not marked as small business due to a system error.***					
0001	BASE PERIOD: Provide services in accordance with the attached Performance Work Statement, Attachment 1 to this Task Order entitled "Development of Streamflow Duration Assessment Methods: Field Sampling and Sample Processing for the Northeast and Southeast Regions (SDAM-NE-SE)" POP from date of award to 09/21/2021 Accounting Info: 20-21-B-87DE-000B88-2505-2087EE4012-00 1 BFY: 20 EFY: 21 Fund: B Budget Org: 87DE Program (PRC): 000B88 Budget (BOC): 2505 DCN - Line ID: 2087EE4012-001 Funding Flag: Complete Funded: (b)(4)				(b)(4)	
0002	OPTION PERIOD: Provide services in accordance with the attached Performance Work Statement, Attachment 1 to this Task Order entitled "Development of Streamflow Duration Assessment Methods: Field Sampling and Sample Processing for the Northeast and Southeast Regions (SDAM-NE-SE)" POP 09/22/2021 - 01/21/2022 Continued ...				(b)(4)	

TOTAL CARRIED FORWARD TO 1ST PAGE (ITEM 17(H)) $999,385.00

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

DATE OF ORDER	CONTRACT NO.	ORDER NO.
09/22/2020	EP-C-16-006	68HERC20F0425

ITEM NO. (a)	SUPPLIES/SERVICES (b)	QUANTITY ORDERED (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)	QUANTITY ACCEPTED (g)
	Accounting Info: 20-21-B-87DE-000B88-2505-2087EE4012-00 1 BFY: 20 EFY: 21 Fund: B Budget Org: 87DE Program (PRC): 000B88 Budget (BOC): 2505 DCN - Line ID: 2087EE4012-001 Funding Flag: Complete Funded: (b)(4) Option Period exercised at time of Task Order Award.					

TOTAL CARRIED FORWARD TO 1ST PAGE (ITEM 17(H)) $0.00

PERFORMANCE WORK STATEMENT
Technical Support for National Aquatic Resource Survey
TASK ORDER: 68HERC20F0425

A. TITLE: Development of Streamflow Duration Assessment Methods: Field Sampling and Sample Processing for the Northeast and Southeast Regions (SDAM-NE-SE)

B. EPA PERSONNEL

Task Order Contracting Officer Representative (TOCOR):

Name: **Brian Topping**
Office: Office of Water/Office of Wetlands, Oceans & Watersheds/Ocean Wetlands and Communities Division / Freshwater and Marine Regulatory Branch
Address: 1200 Pennsylvania Avenue NW (4504T), Washington, DC 20460
Telephone:202-262-5653
E-mail: toppping.brian@epa.gov

Alternate Task Order Contracting Officer Representative (ALT - TOCOR):

Name: **Damaris Christensen**
Office: Office of Water/Office of Wetlands, Oceans & Watersheds/Ocean Wetlands and Communities Division / Program Development and Jurisdiction Branch
Address: 1200 Pennsylvania Avenue NW (4504T), Washington, DC 20460
Telephone:202-566-0371
E-mail: christensen.damaris@epa.gov

C. ESTIMATED PERIOD OF PERFORMANCE

Base Period: 12 months from Award
Option Period: 4 months from completion of Base period

D. TYPE OF TASK ORDER: Cost plus Fixed Fee (CPFF)

I. BACKGROUND:

The Clean Water Act (CWA) Section 404 regulatory program permits a wide range of projects which impact waters of the United States. Under CWA Section 404 the US Army Corps of Engineers (Corps), or states who have assumed the permit program, issue the permits in compliance with regulations established by the Environmental Protection Agency (EPA). EPA reviews public notices for proposed projects and policies, approves assumption of permit programs, and works with the Corps and states on ways to enhance the efficiency and effectiveness of 404 programmatic implementation.

One of the key components in implementing the 404 regulatory program is to conduct jurisdictional determinations to identify what type of water bodies are present on a project site and whether those waterbodies are regulated under the CWA. Determining the jurisdictional status of stream channels often requires the ability to identify whether the flow duration of the stream in question is perennial, intermittent, or ephemeral. However, long-term hydrologic data to assess streamflow duration are limited, especially for intermittent and ephemeral streams; and regulators need a site-specific rapid method for determining streamflow duration at sites where long-term hydrologic data are not available.

Streamflow duration assessment methods (SDAMs) are rapid field-based assessment tools that utilize physical, hydrological, and biological indicators to determine the flow duration of streams (i.e., perennial, intermittent, or ephemeral) and are one type of tool that could be relied on to effectively conduct jurisdictional determinations for streams under section 404 of the CWA. Currently, the Pacific Northwest (PNW) region has an approved SDAM developed and used by EPA, the Corps, and the States of Oregon, Washington, and Idaho since 2015. The Streamflow Duration Assessment Method for the Pacific Northwest can be found here: https://www.epa.gov/measurements/streamflow-duration-assessment-method-pacific-northwest. Additionally, over the past couple of years the EPA has been working with the US Army Corps of Engineers Corps to develop regional SDAMs for use throughout the Arid Southwest (ASW), Western Mountains (WM), and Northern and Southern Great Plains (GP) regions.

The focus of this task is to support the development of regional SDAMs for use throughout the Northeast (NE) and Southeast (SE) regions. The process of developing a streamflow duration assessment method involves six key steps: preparation, baseline site data collection, validation study, data analysis and method development, rollout, and continuous baseline sampling (Table 1). The work under this Task Order (TO) will focus specifically on conducting the field sampling, data collection, and sample processing necessary to carry out the baseline and validation study steps of the method development process. This task will build on the existing work that has been conducted in the PNW, ASW, WM, and GP regions, testing the performance of existing assessment methods and flow duration indicators in order to develop methods specific to the NE and SE regions. The NE region as used in this TO is defined as all or parts of Maine, Vermont, New Hampshire, Massachusetts, Connecticut, Rhode Island, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, West Virginia, Kentucky, North Carolina, Tennessee, Arkansas, Oklahoma, Missouri, Illinois, Ohio, and Michigan found in the Northeast region as identified in the Corps Ordinary High Water Mark (OHWM) Scientific Support Document, found here: https://erdc-library.erdc.dren.mil/xmlui/handle/11681/20650 (Figure 1). The SE region as used in this TO is defined as all or parts of North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, Texas, Arkansas, and Oklahoma, as well as Puerto Rico and the U.S. Virgin Islands as found in the Southeast region identified in the Corps Ordinary High Water Mark (OHWM) Scientific Support Document (Figure 1).

Table 1. Description of the six steps involved in the method development process. The work under this TO is focused on the baseline data collection and validation study steps (highlighted in grey).

Process Step	**Description**
Preparation	Literature review, identification and evaluation of potential hydrologic data sources, and coordination with state, federal, and academic partners to identify regionally specific indicators of flow duration and select sites for baseline data collection and validation studies.
Baseline data collection	**Instrumentation of sites for a minimum of one year to confirm "true" flow duration, with at least three site visits to collect streamflow indicator data during this time. (10% of baseline sites install redundant instrumentation (2 loggers))**
Validation study	**Collection of streamflow indicator data at sites with known flow duration across the region. Validation study sites are independent of the baseline sites. (10% of validation sites resampled)**
Method development	Data analysis to develop a regionally specific method. This step also includes internal peer-review and interagency agreement prior to release of the interim method.
Rollout	Engagement with stakeholders on the method, as well as technical support and training for staff. This step also includes a one-year comment period on the interim method, an external peer-review, and any final revisions.
Continuous baseline sampling	Instrumentation is maintained at all baseline sites and data collection continues on an annual basis to ensure that method development was not biased by interannual climatic and streamflow variation.

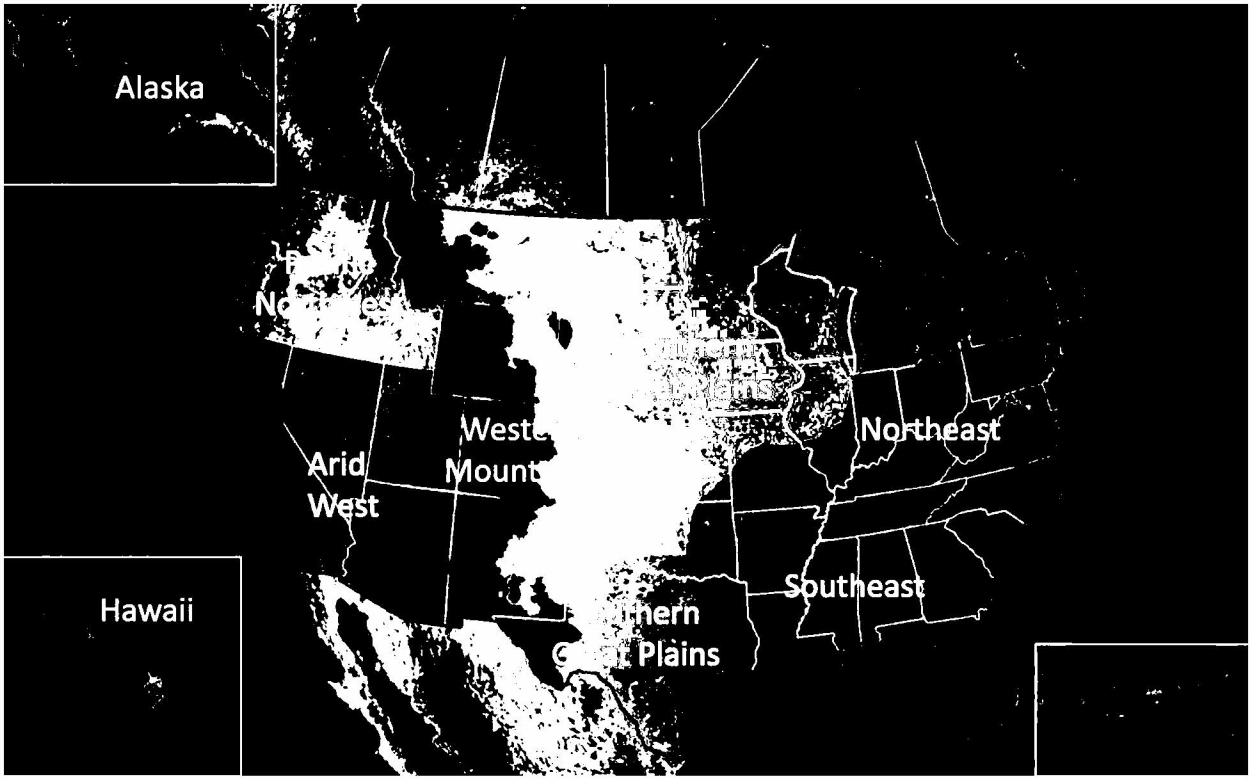

Figure 1. Map of SDAM study regions for development in the Arid Southwest (ASW), Western Mountains (WM), and the Northern and Southern Great Plains (GP), as well as the Northeast (NE) and Southeast (SE) regions covered under this task order. (figure modified from Wohl et al., 2016).

For the purposes of the work under this TO, a stream can be described as a channel containing flowing surface water including:

- stormflow – increased streamflow resulting from the relatively rapid runoff of precipitation from the land as interflow (rapid, unsaturated, subsurface flow), overland flow, or saturated flow from surface water tables close to the stream channel, or;
- baseflow – flow resulting from ground water entering the stream or sustained melt water from glaciers and snowmelt (observed during long gaps between rainfall events), or;
- a combination of both stormflow and baseflow, and;
- contributions of discharge from upstream tributaries as stormflow or baseflow, if present.

*Note: For the purposes of this work the descriptor 'stream' is attached to the channel, and applies regardless of whether flow dries up seasonally or otherwise.

In this task, a stream is classified into one of three flow-duration classes:

- Ephemeral streams flow only in direct response to precipitation. Water typically flows only during and shortly after large precipitation events. Ephemeral streams may or may not have a well-defined channel, the streambed is always above the water table, and stormwater runoff is the primary source of water. An ephemeral stream typically lacks the biological, hydrological, and in some instances physical characteristics commonly associated with the continuous or intermittent conveyance of water.
- Intermittent streams are channels that contain water for only part of the year, typically during the rainy season, where the streambed may be below the water table and/or where the snowmelt from surrounding uplands provides sustained flow. The channel may or may not be well-defined. The flow may vary greatly with stormwater runoff. An intermittent stream may lack the biological and hydrological characteristics commonly associated with the continuous conveyance of water.
- Perennial streams contain water continuously during a year of normal rainfall, often with the streambed located below the water table for most of the year. Groundwater supplies the baseflow for perennial streams, but flow is also supplemented by stormwater runoff or snowmelt. A perennial stream typically exhibits the biological, hydrological, and physical characteristics commonly associated with the continued conveyance of water.

Duration, frequency, and timing of streamflow or drying, as well as flow magnitude, are fundamental properties of streams (Poff and Ward 1989; Winter et al. 1998) which can influence the structure and function of stream ecosystems (e.g., Chadwick and Huryn 2007; Fritz et al. 2008; Austin and Strauss 2011; Datry 2012). Watershed geology, climate, topography, soils, vegetation and human activities can all influence streamflow (Winter et al. 1998; Winter 2007). Water to support streams can originate from numerous sources within a watershed including overland flow from rainfall or snowmelt, shallow subsurface flow through the unsaturated zone, and ground-water discharge (Winter 2007).

As a stream flows from its origin, water may be derived primarily from stormflow, baseflow, or some combination of the two. Streams typically continue to accumulate water from stormflow, baseflow and other tributaries as they flow downstream. As streams accumulate flow they commonly transition along a gradient from ephemeral to intermittent and perennial, but sometimes quickly transition from ephemeral to perennial in high gradient systems, or transition from perennial to ephemeral or to total cessation of surface flow. Often these changes are gradual and may not be obvious to the casual observer. There are, however, indicators of streamflow that can be used to characterize the flow duration of a stream along a particular reach as ephemeral, intermittent or perennial. In this TO, duration encompasses the concept of the cumulative time period of flow over the course of a year, which may vary interannually with climate, groundwater withdrawal or streamflow diversion, and other water use patterns.

This TO is part of a larger effort focused on identifying and testing the methods and indicators available to rapidly identify stream flow duration of any stream reach in a single site visit.

Work under this TO requires expertise in field sampling and assessment methodology for headwater stream systems including techniques to measure and characterize various geomorphological, hydrological, and biological metrics such as channel dimension and structure, hydric soil indicators, hydrophytic plant identification, and aquatic macroinvertebrate identification. In addition to the identification of aquatic macroinvertebrates in the field, work under this TO also requires expertise in standard laboratory procedures for processing aquatic macroinvertebrate samples and taxonomic identification of aquatic macroinvertebrates in a lab. The work conducted under this TO will be overseen by a Project Delivery Team (PDT) comprised of staff from EPA Headquarters and Office of Research and Development, and supported by a Regional Steering Committee (RSC) comprised of staff from EPA Regions staff from the local Corps Districts, the Corps Engineer Research and Development Center (ERDC), and other EPA designees.

EPA will developed an overarching quality assurance project plan (QAPP) for flow duration method development that covers all activities under this task – See example Reference 1.

II. PURPOSE

The purpose of this TO is to provide field sampling support for the development of regional SDAMs for use throughout the Northeast (NE) and Southeast (SE) regions. The work under this TO will focus specifically on conducting the field sampling, data collection, and sample processing necessary to carry out the baseline and validation study steps of the method development process. In particular, the contractor will schedule and deploy field crews to collect data at selected streams and process select macroinvertebrate samples in the laboratory. The contract field crews shall adhere to strict quality assurance and quality control (QA/QC) requirements, including attendance at the SDAM training session; use of appropriate supplies and equipment; and adherence to data reporting requirements and deadlines.

III. GOVERNMENT FURNISHED INFORMATION

The following example references accompany this PWS:

- Reference 1: SDAM Quality Assurance Project Plan (QAPP)
- Reference 2: SDAM Field Protocol (FP)
- Reference 3: SDAM Field Data Sheets
- Reference 4: STIC Data Logger Protocol
- Reference 5: SDAM Sample Processing Protocol

The EPA TOCOR will provide the following references via email as it becomes available.

- Reference 6: SDAM-NE-SE Baseline and Validation Sites

As they become available, the EPA TOCOR will provide the contractor with revisions of example documents, including the QAPP and Field Protocol, and any other information deemed necessary for the contractor to provide the support for the Performance Work Statement (PWS).

During the period of performance, EPA will provide the contractor with:

- Training for the contractor's field crews in the late summer / fall of 2020.
- Assistance visits for the field crews in the late summer / fall of 2020.

IV. GENERAL REQUIREMENTS

In providing support under the tasks described in Section V, the contractor also shall adhere to the following general requirements:

1. Deliverables (see Contract PWS B.1)

Memoranda shall be placed on company letterhead and the subject line shall include the phrase "EPA Contract EP-C-16-0XX". When transmitting deliverables by email, subject headers should include the contract, task order, and deliverable description (e.g., "EP-C-16-0XX TO X: QAPP Signature Pages").

All electronic files shall be clearly named using the project abbreviation, a logical abbreviation for the name of the document (e.g., QAPP), the contractor name (abbreviated), and the date of edits to assist in version control (e.g., SDAM-NE-SE_QAPP_ XX_YYYYMMDD). Proposed edits shall be provided in tracked changes in the original file format (e.g. MS Word). Final versions shall be provided to EPA in both the original format (e.g., Word, PowerPoint) and PDF versions (if necessary, EPA will modify the files to be Section 508 compliant).

Unless specified differently by the EPA TOCOR in written technical direction (per Contract Clause H.12), the contractor shall ensure that documentation is created using Agency standard software formats (e.g., Microsoft Office) to facilitate EPA use and review.

2. Meetings (see Contract PWS Clause B.2)

Contractor personnel shall always identify themselves as contractor employees by name and organization and physically display that information through an identification badge. Contractor personnel are prohibited from acting as the Agency's official representative. The contractor shall refer any questions relating to the interpretation of EPA policy, guidance, or regulation to the TOCOR.

3. The contractor shall follow the provision of EPA prescription 1523.703-1, acquisition of environmentally preferable meeting and conference services (May 2007), for the use of off-site commercial facilities for an EPA event, whether the event is a meeting, conference, training session, or other purpose. Environmental preferability is defined at FAR 2.101, and shall be used when soliciting quotes or offers for meeting /conference services on behalf of the Agency. No single event under this TO is anticipated to exceed $20,000. The contractor shall immediately notify the EPA Contracting Officer, PO and TOCOR of any anticipated event involving support for a meeting, conference, workshop, symposium, retreat, seminar or training that may potentially incur $20,000 or more in cost during performance. Conference expenses are all direct and indirect costs paid by the government and include any associated authorized travel and per die m expenses, room charges for official business, audio visual use, light refreshments, registration fees, ground transportation and other expenses as defined by the Federal Travel Regulations. All outlays for conference preparation should be included, but the federal employee time for

conference preparation should not be included. After notifying EPA of the potential to reach this threshold, the Contractor shall not proceed with the task(s) until authorize d to do so by the Contracting Officer.

4. As required, the TOCOR shall provide technical direction in accordance with Clause H-12 of the contract, EPAAR 1552.237-71 TECHNICAL DIRECTION (AUG 2009) and the Contract Level PWS. Any changes in cost or scope must be approved in writing by the contracting officer.

5. Government Furnished Property (GFP): There will be no GFP provided to the contractor during the performance of this task order. In accordance with FAR 45.102, the contractor shall be required to furnish all property necessary to perform this Task Order. This Task Order does not include the provision of contractor acquired property.

V. SCOPE OF WORK

Task 1. Monthly progress reports (See Contract Attachment 2 and 3; PWS B.2)
The contractor shall manage the Task Order (TO) and submit monthly progress and financial reports prepared and submitted in accordance with the contract clause, Attachment 2, Reports of Work. The monthly progress and financial reports shall be broken out by task. The monthly progress report shall include project status, number of sites sampled (current and cumulative), identify sites sampled during the reporting period, unexpected problems or concerns, lessons learned, quality assurance/ quality control (QA/QC) activities, and next steps. The contractor also shall brief the TOCOR on progress during periodic (e.g., weekly) teleconferences during periods of intense activity.

Deliverables and Schedule under Task 1:

Task	Deliverable	Due
1	Progress and financial reports	Monthly
	Calls with EPA	Per written technical direction by the TOCOR (per Contract Clause H.12)

Task 2. Quality Assurance (Contract PWS B.3)
Quality Assurance (QA) is an important component of EPA's work to assure that minimum quality standards are attained. The contractor shall address the QA requirements of this task order by adhering to the requirements and procedures identified in:

- The contractor's customized Quality Management Plan incorporated into this contract;

- SDAM-NE-SE QA documents which document how quality assurance and quality control will be applied to the collection of environmental data for the study. The documents relevant to support in this task order are:
    - SDAM-NE-SE Quality Assurance Project Plan (QAPP)
    - SDAM-NE-SE Field Protocol (FP)
    - SDAM-NE-SE Sample Processing Protocol

The SDAM-NE-SE QA documents may evolve throughout the task order. The contractor shall notify the EPA TOCOR immediately if it identifies areas where its previous activities are not consistent with the revisions made to the QAPP and FP. The EPA TOCOR will determine whether any modifications to the contractor's previous activities will be necessary, which may require a modification to the task order by the EPA Contracting Officer (CO).

a. As demonstration of the contractor's commitment to adhere to the SDAM-NE-SE QAPP, the contractor shall:
    - Ensure that all sampling personnel have reviewed and understand the requirements and procedures of the SDAM-NE-SE QAPP, the SDAM-NE-SE Field Protocol (FP), and the SDAM-NE-SE Sample Processing Protocol which will be available prior to the field crew training sessions. The certification page entitled "Review & Distribution Acknowledgment and Commitment to Implement" is located in the introductory section of the QAPP.
    - At a minimum, the following personnel shall sign the certification page for the QAPP approved by EPA's Quality Assurance Officer (QAO):
        - Contractor's Task Order Leader
        - Contractor's Quality Assurance Officer,
        - Contractor's Laboratory Quality Assurance Officer (LQAO)
        - **Each crew leader must provide the signed certification page before the crew may commence with sampling events.**
    - At the contractor's discretion, it may also be appropriate for each field crew member to sign the certification page and transmit to EPA.
    - The contractor's QAO and LQAO also shall sign the certification page for each revision of the QAPP that has been approved by EPA's QAO.
    - If EPA distributes updated versions of the QA documents and states that it contains a "significant change" relevant to field sampling or sample processing, the contractor shall acknowledge, in writing (e.g., Email), that it has received and distributed the revised QA documents to the appropriate personnel. If any change will impact the scope and/or cost of the task order, the contractor shall notify the TOCOR and CO immediately.

b. **The contractor shall assign only staff who are Key Personnel (EPAAR 1552.237-72) to be field crew leaders (Tasks 6, 7, and 8) and ensure that the other field crew members and lab members have proper experience, field training, and acceptable educational credentials.** At a minimum, each proposed field crew leader shall have at least three years of experience in leading field crews; and at least three

years of experience in conducting physical habitat assessments, hydrophytic plant identification, hydric soil identification, hydrologic monitoring of sites, and aquatic macroinvertebrate field identification. All field crew leaders shall also:

i. **Complete the SDAM-NE-SE training requirements per Task 3.**

ii. Perform pre-sampling (i.e., in-office) testing of hardcopy and electronic field forms**.**

iii. **Verify and document in equipment logs and project records that contractor's equipment (e.g., GPS system) is properly calibrated and maintained.**

iv. Permit EPA to perform an Assistance Visit (AV) of its field crews during an early sampling event (e.g., the first to fourteenth sampling event by a crew). If a field crew leader oversees more than one crew, EPA will determine if it is necessary to visit each crew or whether fewer visits will meet its quality review objectives (e.g., depending on crew composition, the crews might be viewed as essentially the same). The contractor shall coordinate with EPA, or its designee, on an agreed upon date and location for the AV. EPA, or its designee, will conduct the AV using a checklist provided by EPA, supplemented by photographs if appropriate (e.g., to record a deviation in methods due to extenuating circumstances). Although EPA will arrange for the AVs, it is the contractor's responsibility to ensure that the contractor field crews are abiding by the requirements and procedures of the QAPP and FP at all assigned sites.

c. As demonstration of the contractor's implementation of QA in performing the other tasks in this PWS, the contractor shall document its QA activities as follows:

i. Reports of relevant QA activities in any deliverable. All QA documentation prepared under the task order shall be considered non-proprietary, except for the internal distribution list which may be claimed proprietary.

ii. Monthly reports of QA activities performed during implementation of this task order. These monthly QA reports shall identify QA activities performed to support implementation of this task order, problems encountered, deviations from the SDAM-NE-SE QAPP, and corrective actions taken. The contractor shall include the QA report with the monthly progress report. In addition, the contractor shall immediately bring to the attention of the TOCOR any QA problems that may affect the conduct of the tasks or the project, with recommendations for corrective actions.

d. As demonstration of the contractor's commitment to continuous quality improvements, the contractor shall provide summaries of "lessons learned" based upon its support to the other tasks. EPA will use this information to improve future development of flow duration assessment methods for streams. The contractor shall incorporate EPA comments into revised versions.

Deliverables and Schedule under Task 2:

Task	Deliverable	Due
2.a	Signature page for each version of QAPP approved by EPA's QAO: - With contractor's QAO, contractor's LQAO, and Task Order Leader signatures. - With crew leader signature	- No later than 5 working days after receiving the approved QAPP with EPA QAO's signature - At training
	Email acknowledgement of Field Protocol (FP) with "significant change"	No later than 10 working days after receiving revised FP
2.b	Memo with qualifications of field crew members and lab members, other than the field crew leaders	With first draft of the schedule for field crews in each season. Unless circumstances change unexpectedly, qualifications of replacements, except key personnel, must be submitted at least one week prior to the sampling event. See key personnel clause for process for replacements through a task order modification.
2b.ii	Email with outcome of testing field forms with any recommended changes	5 working days after receiving the first electronic/paper version of field forms. 1-5 working days after receiving subsequent versions, depending on extent of revision and schedule implications.
2.b.iii	Access to contractor's calibration and maintenance records	Within 5 working days after receiving written technical direction from the TOCOR (per Contract Clause H.12)
2.b.iv	Allow access for EPA or its designee to conduct an assistance visit to each field crew	Per written technical direction from the TOCOR (per Contract Clause H.12), based upon scheduling discussions occurring prior to each crews first sampling event
2.c.i	Documentation of QA activities	In deliverables
2.c.ii	Monthly reports of QA activities and immediate notice as needed	With monthly progress report and immediate notice as needed
2.d	Memorandum 1 with lessons learned for baseline data collection	Within 20 days from the end of the first sampling season. Revisions within 5 work days.

Task	Deliverable	Due
	Memorandum 2 with lessons learned for baseline and validation data collections	Within 30 days from the end of the last sampling event. Revisions within 5 work days.

Task 3. Field Training (Contract PWS C.1.g)

EPA and our designees will host at least one two day training session as soon as one month after award. This training will be at a location in the NE or SE region, (use Raleigh, NC for cost estimation purposes). This training course will provide participants with training on the previously developed study design and to conduct baseline sampling according to the approved field protocol, an example of which can be found in PWS Reference 2. (Note: the field protocol to be implemented throughout this TO may be identical to the example found in Reference 2 or may be a refined version based on mutually agreeable revisions made by the PDT and the RSC in response to the following: 1) completion of SDAM development work for the ASW, WM, and GP regions, 2) preparation work for the NE and SE regions, or 3) work completed under this TO in Tasks 6 or 7). The trainings will also cover instrumentation of sites with Stream Temperature, Intermittency, and Conductivity (STIC) data loggers (to be provided and maintained by the contractor), including deployment, resampling, data retrieval, relaunching, and replacement of data loggers (see PWS Reference 4), as well as procedures for processing aquatic macroinvertebrate samples in the lab (see PWS Reference 5). The training will include one 2-hour webinar (e.g., overview and forms) and a 2 day in-person training including classroom and field training. It is preferable that all field crew members participate in training activities, but at a minimum the contractor shall ensure that each field crew leader participates in a training session unless the EPA TOCOR issues written technical direction (per Contract Clause H.12). The contractor shall be responsible for maintaining records of training for all field crew leads and members in the project file, including names, dates, locations, and training description. The contractor shall report out, each month, on any associated training costs (e.g., travel, LOE, etc.) broken out by training using the template provided by the EPA TOCOR.

Deliverables and Schedule under Task 3:

Task	Deliverable	Due
3	Attend training webinar and class	As soon as one month after award
3	Maintain Training Record	As trainings occur
3	Report out on costs associated with attending EPA SDAM-NE-SE trainings	With monthly progress report

Task 4. Site Access and Schedule (See Contract PWS C.2)

One purpose of the field sampling schedule is to ensure that the contractor will sample sites steadily during each sampling season (see Tasks 6, 7, and 8). Prior to the start of each season, EPA will provide the contractor with the list of candidate sites to be reviewed for accessibility. The contractor will use geospatial tools and outreach to relevant parties to determine whether the sites can be reasonably sampled. Within two weeks of receiving the list, the contractor will rate each site as either accessible, maybe or not accessible and return the list to the TOCOR for discussion. Accessible sites are on public lands or otherwise easily sampleable. Maybe sites may require requesting permission with an uncertain outcome or process. Not accessible sites are clearly on private lands with little connection to roads and we are unlikely to receive permission to sample. The TOCOR will work with the PDT to select the sites for sampling from the sites rated accessible and maybe accessible. An additional round of review may be needed if many sites are found to be not accessible. No list will be provided for follow-up visits to baseline sites. The EPA will provide the list of sites for sampling along with any details regarding priorities that must be taken into account in establishing the schedule (e.g., order of sampling for a specific season). As needed, the TOCOR shall issue written technical direction related to this information. Before the start of each field season, the contractor shall provide EPA with the first draft with tentative sampling dates and crew assignments for all sites to be sampled that season. Throughout the season, the contractor shall revise the schedule to incorporate the EPA TOCOR's written technical direction (per Contract Clause H.12) or mitigating factors, including, but not limited to, weather, field crew changes, and unanticipated delays.

a. Accessibility review for candidate sites
b. Baseline site sampling schedule
c. Baseline site first revisit schedule
d. Baseline site second revisit schedule
e. Validation site sampling schedule
f. For any site, if upon arrival on location, the contractor finds that conditions are not appropriate for sampling (i.e., the stream no longer exists or is not wadeable), the contractor shall discontinue sampling and notify the EPA TOCOR that a replacement site is necessary. The contractor shall revise the schedule to include the new site.

Deliverables and Schedule under Task 4:

Task	Deliverable	Due
4.a	Site Accessibility Review	Two weeks after receiving the list of candidate sites
4.b	First draft of baseline site sampling schedule	First draft due within one week of receipt of selected baseline site list. Revisions per written technical direction (per Contract Clause H.12). Revisions are required until the field sampling is complete.

Task	Deliverable	Due
4.c	First draft of baseline site first revisit schedule	First draft due within one month of the completion of initial baseline site sampling. Revisions per written technical direction (per Contract Clause H.12). Revisions are required until the field sampling is complete.
4.d	First draft of baseline site second revisit schedule	First draft due within three weeks of receipt of the selected validation site list. Revisions per written technical direction by the TOCOR (per Contract Clause H.12). Revisions are required until the field sampling is complete.
4.e	First draft validation site sampling schedule	First draft due within three weeks of receipt of the selected validation site list. Revisions per written technical direction by the TOCOR (per Contract Clause H.12). Revisions are required until the field sampling is complete.
4.f	Notification of site conditions	As soon as possible per availability of phone or email access.

Task 5. Preparation for Field Sampling (See Contract PWS C.1)

The contractor shall prepare for field sampling visits and subsequent sample processing as follows:

a. The contractor shall be responsible for providing consumable materials for field sampling and sample processing in the lab as described in the QAPP, the Field Protocol, and the Sample Processing Protocol. These materials include but are not limited to paper copies of data sheets, sampling containers, and consumable sampling and sample processing equipment (e.g., paper towels, falcon tubes (filled with 70% ethanol), plastic bags).

b. The contractor shall arrange for and supply vehicles, staff, and all other necessary non-consumable equipment to the field crews including, but not limited to, STIC data loggers, kicknets, field guides, clinometers, tape measurers, densiometers, and GPS devices. The contractor shall also supply first aid kits and any personal protection clothing and equipment that may be necessary for staff to conduct field sampling.

c. The contractor shall arrange for and supply all necessary non-consumable equipment to the lab members including, but not limited to dissecting microscopes, sorting trays, forceps, taxonomic keys, and personal protection clothing and equipment.

Deliverables and Schedule under Task 5:

Task	Deliverable	Due
5.a	Consumable supplies	During field sampling visits and subsequent sample processing
5.b	Supply field equipment	During field sampling visits
5.c	Supply lab equipment	During sample processing

Task 6. Initial Field Sampling Visits and Sample Processing for Baseline Sites (See Contract PWS C.2)

The contractor will implement an approved study design and sampling methodology for at least 240 baseline sites across the NE and SE regions. The sites, which will be preselected by the PDT, will be spread across the NE and SE regions and will represent watersheds with different sizes, geologies, and climates, as well as disturbed and natural watersheds. Sites will be divided into approximate thirds, representing perennial, intermittent, and ephemeral streams (as well as sites representing transitional locations). Sites will be on public lands or publicly accessible and will also be locally clustered to allow for sampling two or more sites per day. During the initial site visit the contractor will conduct the approved sampling methodology, as well as deploy STIC loggers (to be provided and maintained by the contractor) at each site using the protocol found in PWS Reference 4 - Stream Temperature, Intermittency, and Conductivity (STIC) Data Loggers Protocol. At 10% of the sites, two STIC loggers will be deployed. The field protocol to be implemented under this Task may be identical to the example found in PWS Reference 2 or may be a refined version based on mutually agreeable revisions made by the PDT and the RSC in response to the following: 1) completion of SDAM development work for the ASW, WM, and GP regions, or 2) preparation work for the NE and SE regions. Some aquatic macroinvertebrate samples will be collected as part of the protocol to confirm family level field identifications, and plant vouchers may also be collected to confirm identification if needed (see PWS Reference 2 and PWS Reference 5). Sample handling for all aquatic macroinvertebrate samples and any plant vouchers will be conducted in accordance with the QAPP. Data will be entered directly into a digital template (or onto paper data sheets) and the entries will be reviewed in the field before leaving the site to ensure that all needed information has been acquired, that recordings are legible, and that the data seem reasonable. All data sheets will be scanned and added to the project file and original data sheets will be transcribed into the identified database. All digitally collected data will be uploaded to the database as soon as possible and backed up at least daily. Following data entry to the database, analysts will check a random 10% of each other's entered data against the original source. If errors are discovered then the original data entry person will correct those errors and recheck the remaining entries, while the second analyst will recheck a different 10% of data for errors. All QA activities (e.g., audits or sample processing for confirmation of identities) will be conducted

in accordance with the QAPP.

a. Instrumentation and initial baseline site visits for the combined NE and SE regions

   Following the site selection and approval of the sampling protocol by the PDT, the contractor will oversee equipment installation and initial data collection for at least 240 baseline sites in the combined NE and SE regions. Data collection, along with data entry and QA activities shall be completed within the first 3 months of award, at which time the contractor shall provide the raw sampling results based on the approved methodology to EPA and our designee for analysis. The contractor shall also send all scanned field forms to EPA's designee at this time.

b. Sample processing from initial visits to NE and SE baseline sites

   After beginning instrumentation and initial baseline site visits for the combined NE and SE regions, the contractor will oversee macroinvertebrate sample processing in the lab for all of the samples collected from the initial baseline site visits. Sample processing, along with data entry and QA activities shall be completed within the first 4 months of award, at which time the contractor shall provide the raw data based on the approved methodology to EPA and our designee for analysis. The contractor shall also send all lab data forms to EPA's designee at this time.

Deliverables and Schedule under Task 6:

Task	Deliverable	Due
6.a	Collect data, complete data entry and QA activities for all 240 baseline sites in the combined NE and SE regions	Within 3 months of task order award
6.b	Process samples, complete data entry and QA activities for all 240 baseline sites in the combined NE and SE regions	Within 4 months of task order award

Task 7. Follow-Up Field Sampling Visits and Sample Processing for Baseline Sites (See Contract PWS C.2)

The contractor will conduct at least two additional site visits for all baseline sites across the NE and SE regions to implement the approved study design and sampling methodology. Follow-up site visits should be planned so that over the span of one year, all baseline sites will be visited a total of three times across multiple seasons; ideally, intermittent sites will be visited during both the wet and dry phases. During the follow-up site visits the contractor will conduct the approved indicator sampling methodology and download STIC logger data using the protocol found in PWS Reference 4. The field protocol to be implemented under this Task may be identical to the example found in PWS Reference 2 or may be a refined version based on mutually agreeable revisions made by the PDT and the RSC in response to the following: 1) completion of SDAM development work for the ASW, WM, and GP regions, 2) preparation work for the NE and SE regions, or 3) preliminary findings from work completed under Task Area 6 of this TO. Some aquatic macroinvertebrate samples will be collected as part of the protocol to confirm family level field identifications, and plant vouchers may also be collected to confirm identification if needed (see PWS Reference 2 and PWS Reference 5). Sample handling for all aquatic macroinvertebrate samples and any plant vouchers will be conducted in accordance with the QAPP. Data will be entered directly into a digital template (or onto paper data sheets), and entries will be reviewed in the field before leaving the site to ensure that all needed information has been acquired, that recordings are legible, and that the data seem reasonable. All digitally collected data will be uploaded to the database as soon as possible and backed up at least daily. All data sheets will be scanned and added to the project file and original data sheets will be transcribed into an Access database. Following data entry to the database, analysts will check a random 10% of each other's entered data against the original source. If errors are discovered then the original data entry person will correct those errors and recheck the remaining entries, while the second analyst will recheck a different 10% of data for errors. All QA activities (e.g., audits or sample processing for confirmation of identities) will be conducted in accordance with the QAPP.

a. Second site visit for the NE and SE regions

   Using the approved study design and the sampling protocol, the contractor will conduct a second site visit for all baseline sites in the NE and SE regions. Data collection for the second site visits, along with data entry and QA activities, shall be completed within 9 months of task order award, at which time the contractor shall provide the raw sampling results based on the approved methodology to EPA and our designee for analysis. The contractor shall also send all scanned field forms to EPA's designee at this time.

b. Sample processing from second visits to NE and SE baseline sites

   After beginning the second baseline site visits for the combined NE and SE regions, the contractor will oversee macroinvertebrate sample processing in the lab for all of

the samples collected from the second baseline site visits. Sample processing, along with data entry and QA activities shall be completed within the first 10 months of award, at which time the contractor shall provide the raw data based on the approved methodology to EPA and our designee for analysis. The contractor shall also send all lab data forms to EPA's designee at this time.

c. Third site visit for the NE and SE regions **(Option Period 1 activity)**

Using the approved study design and the sampling protocol, the contractor will conduct a third site visit for all baseline sites in the NE and SE regions. Data collection for the third site visits, along with data entry and QA activities, shall be completed within 14 months of award, at which time the contractor shall provide the raw sampling results based on the approved methodology to EPA and our designee for analysis. The contractor shall also send all scanned field forms to EPA's designee at this time.

d. Sample processing from third visits to NE and SE baseline sites **(Option Period 1 activity)**

After beginning the third baseline site visits for the combined NE and SE regions, the contractor will oversee macroinvertebrate sample processing in the lab for all of the samples collected from the third baseline site visits. Sample processing, along with data entry and QA activities shall be completed within the first 15 months of award, at which time the contractor shall provide the raw data based on the approved methodology to EPA and our designee for analysis. The contractor shall also send all lab data forms to EPA's designee at this time.

Deliverables and Schedule under Task 7:

Task	Deliverable	Due
7.a	Collect data, complete data entry and QA activities for all 240 baseline sites in the NE and SE regions	Within 9 months of task order award
7.b	Process samples, complete data entry and QA activities for all 240 baseline sites in the combined NE and SE regions	Within 10 months of task order award
7.c	Collect data, complete data entry and QA activities for all 240 baseline sites in the NE and SE regions (Option Period 1 activity)	Within 14 months of task order award

Task	Deliverable	Due
7.d	Process samples, complete data entry and QA activities for all 240 baseline sites in the combined NE and SE regions (Option Period 1 activity)	Within 15 months of task order award

Task 8. Field Sampling Visits and Sample Processing for Validation Sites (See Contract PWS C.2)

The contractor will implement an approved study design and sampling methodology for at least 160 validation sites across the NE and SE regions with 10% identified as resample sites (total of 176 sampling events). The sites, which will be preselected by the PDT, will be spread across the NE and SE regions and will represent watersheds with different sizes, geologies, and climates, as well as disturbed and natural watersheds. Sites will be divided into approximate thirds, representing perennial, intermittent, and ephemeral streams (as well as sites representing transitional locations). Sites will be on public lands or publicly accessible and will also be locally clustered to allow for sampling two or more sites per day. During the site visit the contractor will conduct the approved sampling methodology. The field protocol to be implemented under this Task Area may be identical to the example found in PWS Reference 2 or may be a refined version based on mutually agreeable revisions made by the PDT and the RSC in response to the following: 1) completion of SDAM development work for the ASW, WM, and GP regions, 2) preparation work for the NE and SE regions, or 3) preliminary findings from work completed under Tasks 6 and 7 of this TO. Some aquatic macroinvertebrate samples will be collected as part of the protocol to confirm family level field identifications, and plant vouchers may also be collected to confirm identification if needed (see PWS Reference 2 and PWS Reference 5). Sample handling for all aquatic macroinvertebrate samples and any plant vouchers will be conducted in accordance with the QAPP. Data will be entered into a digital template or onto paper data sheets and data entries will be reviewed in the field before leaving the site to ensure that all needed information has been acquired, that recordings are legible, and that the data seem reasonable. All digitally collected data will be uploaded to the database as soon as possible and backed up at least daily. All data sheets will be scanned and added to the project file and original data sheets will be transcribed into the identified database. Following data entry to the database, analysts will check a random 10% of each other's entered data against the original source. If errors are discovered then the original data entry person will correct those errors and recheck the remaining entries, while the second analyst will recheck a different 10% of data for errors. All QA activities (e.g., audits or sample processing for confirmation of identities) will be conducted in accordance with the QAPP.

a. Validation site visits for the NE and SE regions

   Following the site selection and approval of the sampling protocol by the PDT, the contractor will oversee data collection for at least 160 validation sites in the NE and

SE region. Data collection, along with data entry, sample processing, and QA activities shall be completed within the first 11 months of award, at which time the contractor shall provide the raw sampling results based on the approved methodology to EPA and our designee for analysis. The contractor shall also send all scanned field forms to EPA's designee at this time.

b. Sample processing from visits to NE and SE validation sites

After beginning the validation site visits for the combined NE and SE regions, the contractor will oversee macroinvertebrate sample processing in the lab for all of the samples collected from the validation site visits. Sample processing, along with data entry and QA activities shall be completed within the first 12 months of award, at which time the contractor shall provide the raw data based on the approved methodology to EPA and our designee for analysis. The contractor shall also send all lab data forms to EPA's designee at this time.

Deliverables and Schedule under Task 8:

Task	Deliverable	Due
8.a	Collect data, complete data entry, sample processing, and QA activities for all 160 validation sites (176 sampling events) in the NE and SE region	Within 11 months of task order award
8.b	Process samples, complete data entry and QA activities for all 160 validation sites (176 sampling events) in the combined NE and SE regions	Within 12 months of task order award

Task 9. Post-Sampling Activities (See Contract PWS C.2)

The contractor shall make field crews available to respond to EPA's post-sampling questions about the sampling observations and procedures that might affect the data values and quality. If questions come from sources other than the EPA TOCOR (e.g., Other contractors working on this project), copy the EPA TOCOR on the email response or provide a summary by email (e.g., if the questions were posed through telephone conversations).

Unless the TOCOR grants an exception in accordance with agency procedures, the contractor shall refrain from publishing findings based upon work conducted under this task order. This restriction shall remain in effect until EPA provides public access to the data.

Deliverables and Schedule under Task 9:

Task	Deliverable	Due
9	Email responding to data questions	Within 5 working days, if field crew is available. Otherwise, provide email within 5 days with expected response date.

VI. TRAVEL

This section provides a summary of the travel requirements described in Section V. Assume each field crew contains 2 or more members, one of which is a crew leader. Here are assumptions to use in costing:

Task V.3 (Training) –

- All crew leaders, other key personnel and crew members attend a two day EPA coordinated training prior to starting field sampling. (Training location(s) will be within the NE and/or SE regions –Raleigh, NC can be used for cost estimation; however, actual training location(s) selected after award may differ from those used in this costing).

Task V.6, 7, and 8 (Sampling) –

- For every site, one field crew of 2 or more members travel to the site
- Total of 896 site visits identified in Tasks 6, 7, and 8.
- Travel costs are minimized to the extent possible (e.g., combining nearby sites into one trip for the same crew – averaging three sites a day across the study).

VII. Quality Assurance Surveillance Plan (QASP)

EPA will judge performance using the following Quality Assurance Surveillance Plan (QASP).

Performance Requirement	Measurable Performance Standards	Surveillance Method	Incentives/Disincentives
Management and Communications: The Contractor shall maintain contact with the EPA TOCOR throughout the performance of the task order and shall immediately bring potential problems to the attention of the EPA TOCOR. In cases where issues have a direct impact on field sampling activities, sample processing, project schedules (i.e., not each sampling event), cost, time, or quality, the contractor shall provide options for EPA's consideration on resolving the issues or mitigating their impacts.	Any issue adversely impacting project schedules, cost, time or quality shall be brought to the attention of the EPA TOCOR: i) If the contractor requires EPA guidance during a sampling event, the contractor must contact EPA prior to completing the sampling activities. ii) If the contractor identifies an issue that could affect multiple crews, the contractor shall contact EPA that day so that direction can be provided to all crews in the field. iii) If the contractor identifies sampling issues that are otherwise not urgent, the contractor shall contact EPA within 5 working days.	EPA TOCOR will identify unreported issues.	Four or more incidents where the contractor: • Does not provide timely notification; or • Created a severe adverse situation will be considered unsatisfactory performance and will be reported as such in the CPARS Performance Evaluation System under the category of **Management**. Fewer than four incidents where the contractor does not meet the measurable performance standard will be considered acceptable performance and will be reported as such in the CPARS Performance Evaluation System under the category of Management.
Timeliness: Completed field sampling data forms, sample processing forms, and data shall be delivered in accordance with the requirements of the QAPP.	No more than 10% of the database entry and data forms shall be submitted more than 5 working days past the requirements in the QAPP. If the field form or database entry has not been completed correctly, it will be considered a failure of timeliness.	Delivery for 100% of the database entry and data forms will be tracked by the EPA TOCOR and compared against the requirements in the QAPP.	10 or more incidents where the contractor does not meet the measurable performance will be considered unsatisfactory performance and will be reported as such in the CPARS Performance Evaluation System under the category of **Schedule**. Fewer than ten incidents where the contractor does not meet the measurable performance standard will be considered acceptable performance and will be reported as such in the CPARS Performance Evaluation System.
Cost Management and Control: The Contractor shall monitor, track, and accurately report cost and	The contractor shall manage costs to the level of approved ceiling on the task order. The contractor shall notify the TOCOR, PO and CO when 75% of the	The TOCOR will compare actual versus projected expenditures on a monthly basis (via meetings, monthly progress reports &	Unsatisfactory rating under the category of **Cost Control** in CPARS when the contractor does not meet the

Performance Requirement	Measurable Performance Standards	Surveillance Method	Incentives/Disincentives
fee expenditures to EPA through progress reports and approved special reporting requirements. The Contractor shall assign appropriately leveled and skilled personnel to all tasks, practice and encourage time management, and ensure accurate and appropriate cost control.	approved funding ceiling for the task order is reached.	milestones established for each deliverable).	measurable performance standards. An acceptable rating will be reported in the CPARS Performance Evaluation System under the category of Cost Control if the contractor meets the measurable performance standards and accurately reports the costs.
Technical Effort: The Contractor shall assign appropriately leveled and skilled personnel to all tasks; and abide by the contractor's QMP, the field protocol, and QAPP.	No more than 25% of reviewed deliverables and data shall require revisions to meet the requirements. All of the assigned staff must meet the requirements in the field protocol, and QAPP.	100% of the data and staffing will be reviewed by the EPA TOCOR to identify noncompliance issues.	Unsatisfactory rating under the category of **Quality** in CPARS when the contractor does not meet the measurable performance standards during an applicable period of performance.

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. CONTRACT ID CODE	PAGE OF PAGES
	1 3

2. AMENDMENT/MODIFICATION NO.	3. EFFECTIVE DATE	4. REQUISITION/PURCHASE REQ. NO.	5. PROJECT NO. *(If applicable)*
P00001	See Block 16C	PR-OW-20-00810	

6. ISSUED BY CODE CAD

CAD
US Environmental Protection Agency
26 West Martin Luther King Drive
Mail Code: W136
Cincinnati OH 45268-0001

7. ADMINISTERED BY *(If other than Item 6)* CODE

8. NAME AND ADDRESS OF CONTRACTOR *(No., street, county, State and ZIP Code)*

ESS GROUP, INC.
Attn: ROBERT ERICKSON
10 HEMINGWAY DR # 2
RIVERSIDE RI 02915

CODE 019131986 FACILITY CODE

(x) 9A. AMENDMENT OF SOLICITATION NO.

9B. DATED *(SEE ITEM 11)*

x 10A. MODIFICATION OF CONTRACT/ORDER NO.
EP-C-16-006
68HERC20F0425

10B. DATED *(SEE ITEM 13)*
09/22/2020

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

☐ The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers ☐ is extended. ☐ is not extended.
Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended , by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted ; or (c) By separate letter or electronic communication which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted , such change may be made by letter or electronic communication, provided each letter or electronic communication makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA *(If required)*
See Schedule (b)(4)

13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

CHECK ONE	
	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: *(Specify authority)* THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES *(such as changes in paying office, appropriation data, etc.)* SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
X	D. OTHER *(Specify type of modification and authority)* Unilateral - FAR 52.232-22

E. IMPORTANT: Contractor ☒ is not ☐ is required to sign this document and return _____ copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION *(Organized by UCF section headings, including solicitation/contract subject matter where feasible.)*

DUNS Number: 019131986
The purpose of this modification is to provide incremental funding to Option Period 1 in the amount of (b)(4)
TOCOR: Brian Topping Max Expire Date: 01/22/2022 InvoiceApprover: Brian Topping Alt Invoice App: Damaris Christensen
LIST OF CHANGES:

Reason for Modification: Funding Only Action

New Total Amount for this Version: (b)(4)
New Total Amount for this Award: $999,385.00
Continued ...

Except as provided herein, all terms and conditions of the document referenced in Item 9 A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER *(Type or print)*		16A. NAME AND TITLE OF CONTRACTING OFFICER *(Type or print)*	
		Sandra Stargardt-Licis	
15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA	16C. DATE SIGNED
(Signature of person authorized to sign)		ELECTRONIC SIGNATURE *(Signature of Contracting Officer)*	09/24/2020

NAME OF OFFEROR OR CONTRACTOR
ESS GROUP, INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)

Obligated Amount for this Modification: (b)(4)
New Total Obligated Amount for this Award:
(b)(4)
Incremental Funded Amount changed: (b)(4)
(b)(4)

CHANGES FOR LINE ITEM NUMBER: 2
Obligated Amount for this Modification: (b)(4)
Incremental Funded Amount changed from
(b)(4)

NEW ACCOUNTING CODE ADDED:
Account code:
20-21-B-87DE-000BE2-2505-2087EE4019-001
Beginning FiscalYear 20
Ending Fiscal Year 21
Fund (Appropriation) B
Budget Organization 87DE
Program (PRC) 000BE2
Budget (BOC) 2505
Job # (Site/Project)
Cost Organization
DCN-LineID 2087EE4019-001
Quantity: 0
Amount: (b)(4)
Percent: (b)(4)
Subject To Funding: N
Payment Address:

Payment:
RTP Finance Center
US Environmental Protection Agency
RTP-Finance Center (AA216-01)
109 TW Alexander Drive
www2.epa.gov/financial/contracts
Durham NC 27711
Period of Performance: 09/22/2020 to 01/21/2022
All other terms and conditions remain unchanged.

B-3 Local Clauses EPA-B-32-101 LIMITATION OF FUNDS NOTICE

(a) Severable services may be incrementally funded. Non-severable services shall not be incrementally funded. Pursuant to clause 52.232-22/Limitation of Funds, incremental funding in the amount of (b)(4) allotted to cover estimated cost. Funding in the amount of (b)(4) is provided to cover the corresponding increment of fixed fee. The amount allotted for costs is estimated to cover the contractor's performance through 01/20/2022.

(b) When the contract is fully funded as specified in clause EPA-B-16-102/ Estimated Cost and Fixed Fee, then clause 52.232-20/Limitation of Cost shall become applicable.

(c) Recapitulation of Funds

RECAPITULATION OF FUNDING TO DATE BY CONTRACT PERIOD
CONTRACT NO. EP-C-16-006
TASK ORDER NO. 68HERC20F0425

Option Period 1 - FROM 9/22/2021 through 01/21/22

FUNDING ACTION	ESTIMATED COST	FIXED FEE	TOTAL COST PLUS FIXED FEE
Award	(b)(4)	(b)(4)	$ 377,947.78
P00001			$ 15,385.03
Total Funded			$ 393,332.81
Total Per Contract			$ 393,750.00
Balance Unfunded			$ 417.19

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. CONTRACT ID CODE	PAGE OF PAGES
	1 2

2. AMENDMENT/MODIFICATION NO.	3. EFFECTIVE DATE	4. REQUISITION/PURCHASE REQ. NO.	5. PROJECT NO. *(If applicable)*
P00002	See Block 16C	PR-OW-22-00217	

6. ISSUED BY CODE CAD

CAD
US Environmental Protection Agency
26 West Martin Luther King Drive
Mail Code: W136
Cincinnati OH 45268-0001

7. ADMINISTERED BY *(If other than Item 6)* CODE

8. NAME AND ADDRESS OF CONTRACTOR *(No., street, county, State and ZIP Code)*

ESS GROUP, INC.
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(x) 9A. AMENDMENT OF SOLICITATION NO.

9B. DATED *(SEE ITEM 11)*

x 10A. MODIFICATION OF CONTRACT/ORDER NO.
EP-C-16-006
68HERC20F0425

10B. DATED *(SEE ITEM 13)*
09/22/2020

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

☐ The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers ☐ is extended. ☐ is not extended.
Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended , by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted ; or (c) By separate letter or electronic communication which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted , such change may be made by letter or electronic communication, provided each letter or electronic communication makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA *(If required)*
See Schedule

13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

CHECK ONE	
	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: *(Specify authority)* THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES *(such as changes in paying office, appropriation data, etc.)* SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
X	D. OTHER *(Specify type of modification and authority)* Bilateral - Mutual Agreement of the Parties

E. IMPORTANT: Contractor ☐ is not ☒ is required to sign this document and return 1 copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION *(Organized by UCF section headings, including solicitation/contract subject matter where feasible.)*

DUNS Number: 019131986
The purpose of this modification is to extend the Period of Performance end date to 02/28/2022 at no additional cost to the government due to delays related to the Covid-19 Pandemic.
TOCOR: Brian Topping Max Expire Date: 02/28/2022 InvoiceApprover: Brian Topping Alt Invoice App: Damaris Christensen
LIST OF CHANGES:
Reason for Modification: Supplemental Agreement for work within scope
Period Of Performance End Date changed from 21-JAN-22 to 28-FEB-22
Maximum Potential Expiration Date changed to: 02/28/2022
Onsite Contract changed to: N
Continued ...

Except as provided herein, all terms and conditions of the document referenced in Item 9 A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER *(Type or print)*		16A. NAME AND TITLE OF CONTRACTING OFFICER *(Type or print)*	
		Sandra Stargardt-Licis	
15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA	16C. DATE SIGNED
(Signature of person authorized to sign)		ELECTRONIC SIGNATURE *(Signature of Contracting Officer)*	01/20/2022

NAME OF OFFEROR OR CONTRACTOR
ESS GROUP, INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	Payment: RTP Finance Center US Environmental Protection Agency RTP-Finance Center (AA216-01) 109 TW Alexander Drive www2.epa.gov/financial/contracts Durham NC 27711 Period of Performance: 09/22/2020 to 02/28/2022 All other terms and conditions remain unchanged.				